

Work Order ID 115815

115815

Page 1

May-23-14 10:12:21 AM

Item ID: D2432

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bearpaw 19" X 24"

Start Date: 4/04/14 Start Qty: 8.00

8

Cust Item ID:

Required Date: 4/04/14 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan: W

Date: _____

Tooling: _____

Date: _____

Run Start *NR1*

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop *NR2*

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2432

H

105

0.00

105

Purchasing

Memo

0.00

Purchasing

ISSUE PO 24350
Cut Blank as per D2432 FileCL 14/05/26 8

115

Receive & Inspect for Damage & Mat'l Certs

0.00

115

Packaging

Memo

0.00

Packaging

EX SP14-6-10

125

QC6- Inspect dimensions to drawing

0.00

125

QC

Memo

0.00

Quality Control

CL 14/06/23

Work Order ID 115815

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Item ID: D2432 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bearpaw 19" X 24"
Start Date: 4/04/14 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 4/04/14 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1 Memo 1-Inspect material for defects or damage prior to machining 2-Machine as per Folio and Dwg D2432 Identify as D2432F 3-Deburr	0.00 0.00				DAS 02 9-89	14	06	22 PTO
140 *140* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00				DAS 02 9-89	14	06	22
150 *150* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				8			DAS 25 9-89 14623

DQA:

Date: 14/07/11



QA Closed:

Date: 14/6-27

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>115815</u>	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input checked="" type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D2432</u>		Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>
NCR No. <u>14-3976</u>		Machining <input checked="" type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>
		Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>
		Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	14-06-27	30	x2	0.250" dimension measures 0.227" on one and 0.228" on other on one side only (outer side) chips under cover plate Re. was't cleaned correctly OPERATOR ERROR.	DAS 12 9-89 14/6/23	Outer edge only, Low stress in that area. Acceptable.	DAS 12 9-89 14/6/23	DAS 25 9-89 14-6-23	DAS 16 9-89 14/6/23
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration	<input type="checkbox"/> Outside Dimensions <input checked="" type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Item ID: D2432 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Bearpaw 19" X 24"
 Start Date: 4/04/14 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 4/04/14 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Identify as per dwg & Stock Location: _____	0.00							
160									
Packaging	Memo	0.00				8X		DAS 28 9-89	JUN 23 2014
Packaging									

170	QC21- Final Inspection - Work Order Release	0.00							
170									
QC	Memo	0.00							
Quality Control									

MCS 140624
 JMF
 14-6-23

Picklist Print

May-23-14 10:12:20 AM

Page 1

Work Order ID: 115815

115815

Parent Item: D2432

D2432

Parent Item Name: Bearpaw 19" X 24"

Start Date: 4/04/14

Required Date: 4/04/14

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A 12.10.17 AS PER DWG REV.H DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			120	sf	400.0000	3.7	29.6			

MUHMWB10

UHMW 1" Black - 48"x120" Tivar Mfg.#52480104

**

Location

Loc Qty

Loc Code

MAT018

400

m128267

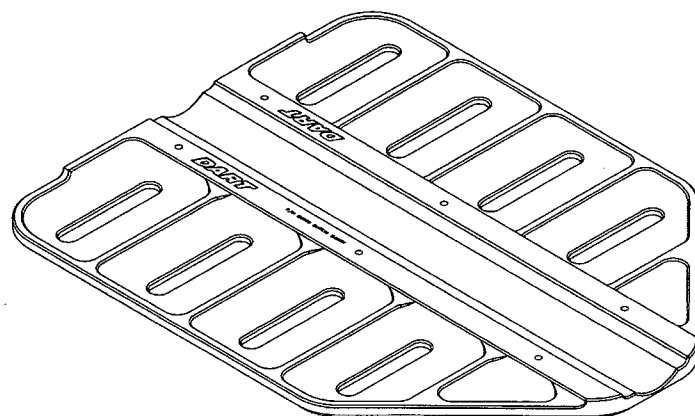
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m128668

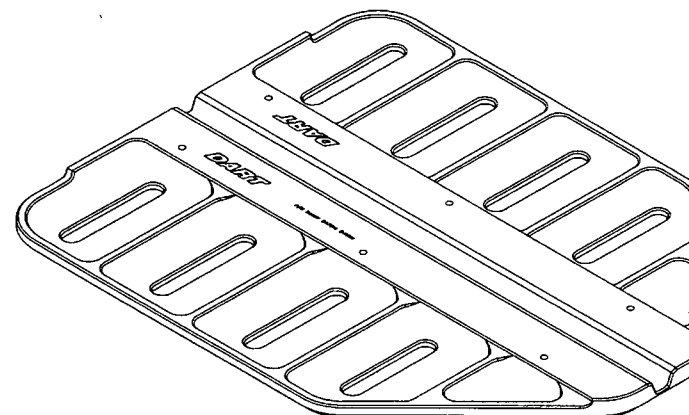
353

m129293

CD14/05/28 29.6



D2432F BEARPAW

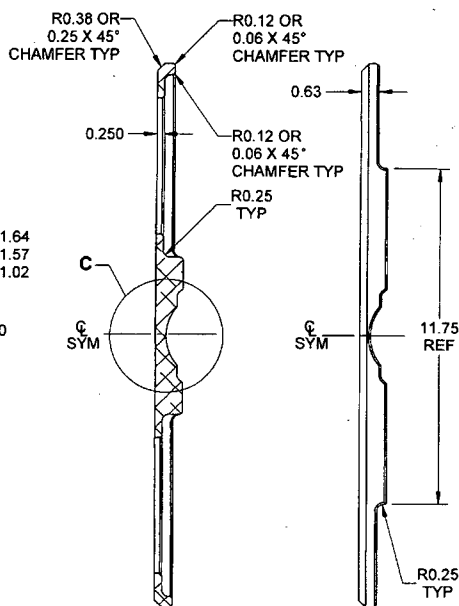


D2432-3 BEARPAW

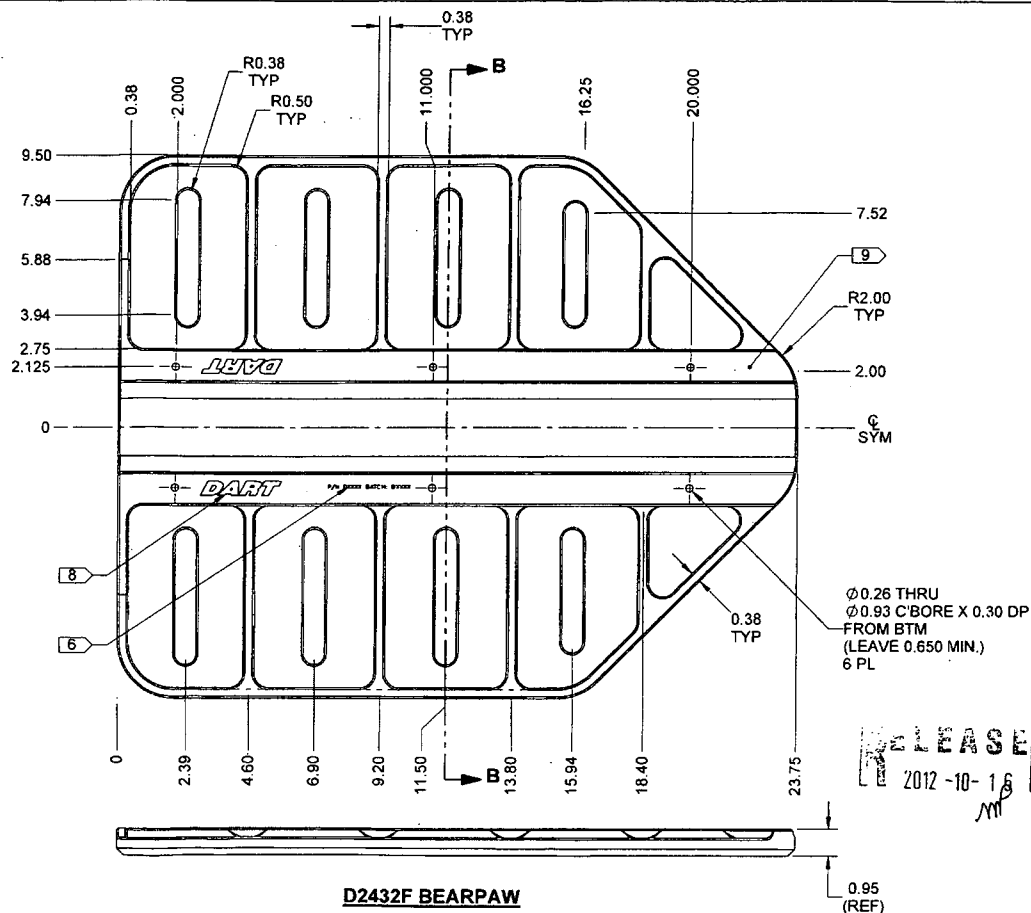
RELEASED
2012-10-16

115815 MJS
14-04-09

H	RIB HEIGHTS CHANGED TO CONDITION OF REV. F. SEE REV. F FOR DETAILS.	AP	12.09.24
G	UPDATE DRAWING FORMAT, REMOVED D2432B, ADD D2432-3, ADDED DIMENSION 7.52 (D1-2)	AP	12.05.02
F	CHANGE C'BORE, ADD B AND F P/N	-	98.05.12
E	CHANGE C'BORE DEPTH, BORE RADIUS	-	97.02.27
D	MOVE SLOT	-	96.06.04
C	CHANGE BORE AND C'BORE DEPTH	-	96.03.26
B	RE-DESIGN	-	96.01.24
A	NEW ISSUE	-	95.10.31
REV.	DESCRIPTION	BY	DATE
DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ASS	DRAWING NO.	REV.
MFG. APPR.	AP	D2432	SHEET 1 OF 3
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	BEARPAW	NTS
DATE	12.09.24	COPYRIGHT © 1996 BY DART AEROSPACE LTD	
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SECTION B-B



RELEASE
2012-10-16

D2432F BEARPAW

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950
(REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432" AND BATCH NUMBER "BXXXXX" IN
ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 5.87 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2434F-REVH.STP"

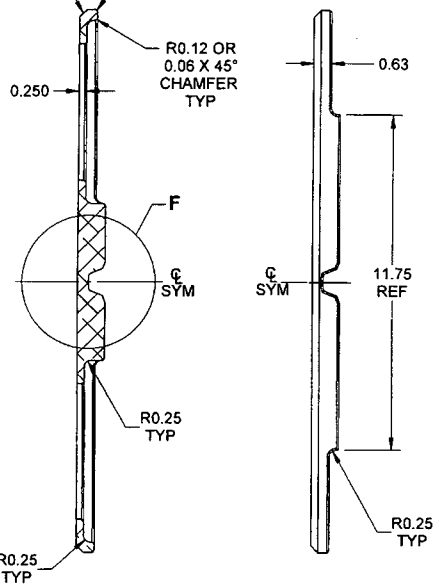
DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKSBURY, ONTARIO, CANADA	
CHECKED	<i>AJS</i>	DRAWING NO.	REV. H
MFG. APPR.	<i>21</i>	D2432	SHEET 2 OF 3
APPROVED	<i>140</i>	TITLE	SCALE
DE APPR.	<i>14</i>	BEARPAW	NTS
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8 7 6 5 4 3 2 1

R0.38 OR
0.25 X 45°
CHAMFER
TYP

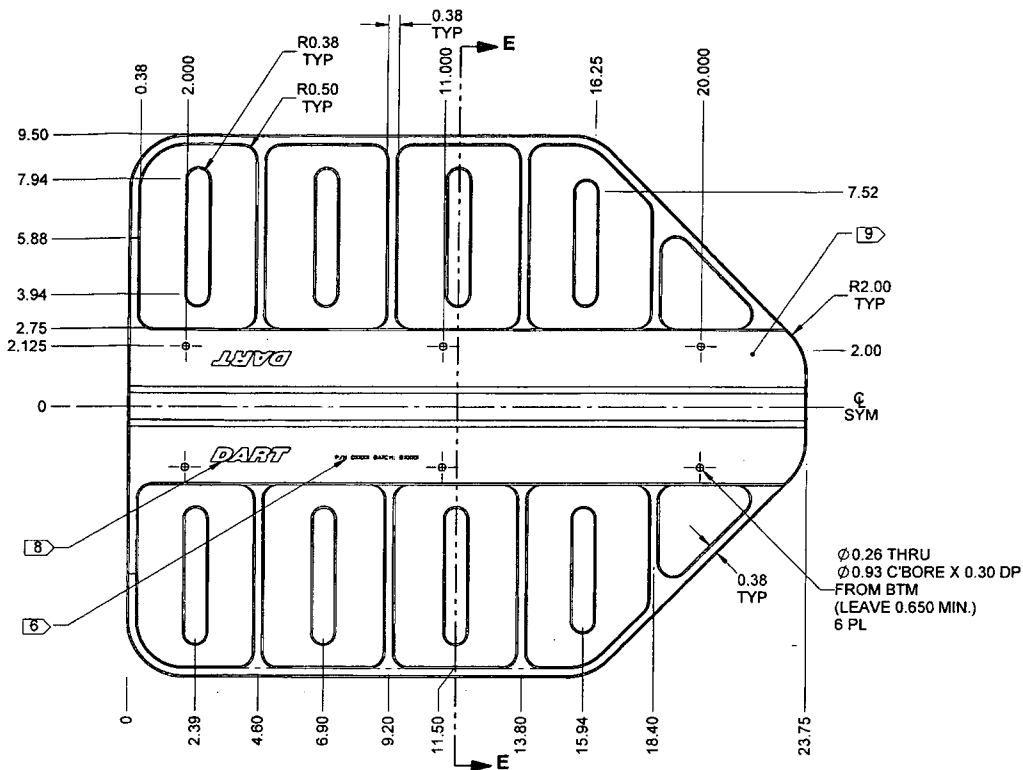
R0.12 OR
0.06 X 45°
CHAMFER
TYP

R0.12 OR
0.06 X 45°
CHAMFER
TYP



DETAIL F
SCALE 2X

SECTION E-E



D2432-3 BEARPAW

RELEASED
2012-10-16

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL, 1.000 THICK MACHINED TO 0.950 (REF DART SPEC. MUHMWB10)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART NUMBER "D2432-3" AND BATCH NUMBER "BXXXXX" IN ACCORDANCE WITH QSI 044 METHOD 6.3
- 7) WEIGHT: 6.25 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.012
- 9) APPLY 0.06 x 45° CHAMFER TO ALL EDGES ON SIDE SHOWN UNLESS OTHERWISE INDICATED
- 10) PROFILE PER DRAWING FILE "D2432-3-REVH.STP"

DESIGN	LE	DART AEROSPACE LTD	
DRAWN	AP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ALS	DRAWING NO.	REV. H
MFG. APPR.	2/1	D2432	SHEET 3 OF 3
APPROVED	1/1	TITLE	SCALE
DE APPR.	1/1	BEARPAW	NTS
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8 7 6 5 4 3 2 1



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID: PO24350

Purchase Order Date 5/26/2014
PO Print Date 5/26/2014

Page Number 1 of 4

m1294

Order From :

VC-TPI001

Ship To :

TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAKED
C814/05/22

Contact Name

Vendor Phone

450-633-0484

Buyer

Customer POID

Customer Tax

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Ship To Contact

Ship To Phone

Ship Via:

Day & Ross collect

Ship Acct:

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extend Pri
1	115815 CUT BLANK AS PER FILE	D2432 BEARPAW	6/13/2014 Yes 6/13/2014		8.00 ✓	\$29.90	\$239.
						Line Total:	\$239.
2	119506 CUT BLANK AS PER FILE	D2432-3 BEARPAW	6/13/2014 Yes 6/13/2014		4.00 ✓	\$29.90	\$119.
						Line Total:	\$119.
3	117114 CUT BLANK AS PER FILE	D2435 BEARPAW	6/13/2014 Yes 6/13/2014		13.00 ✓	\$26.86	\$349.

SP14-610

Note:

5/26/2014

DART AEROSPACE LTD		Work Order:	115815
Description: Beam Paw		Part Number:	2432
Inspection Dwg: D2432 Rev: H		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.20	± 0.030	0.205	✓		depth gauge	BT-6
1.64	"	1.665	✓		vern	BT-4
1.57	"	1.545	✓			
1.02	"	1.005	✓			
0.38	$\pm 0.03/-0.01$	0.391	✓			
0.95	± 0.030	0.959	✓			
0.06 x .45	"	0.067	✓			
0.63	± 0.030	0.630	✓			
11.75	"	11.750	✓		Tape	BT-10
0.38	"	0.377	✓			
2.000	± 0.010	2.000	✓			
11.000	"	11.000	✓			
20.000	"	20.000	✓			
23.75	± 0.030	23.750	✓			
9.50		9.500	✓			
Ø 0.260	$\pm 0.006/-0.001$	0.261	✓			
0.93	± 0.030	0.932	✓			
0.30	"	0.316	✓			

Measured by: DAS 02 BT	Audited by: DAS 25 9-89	Preliminary Approval:
Date: 14-6-22	Date: 14-6-23	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15